

PhD position: Early Diagenetic Dolomitisation of a Triassic Carbonate Platform (Dolomia Principale)

The Department of Sedimentology and Isotope Geology, Institute of Geology, Mineralogy and Geophysics, Faculty of Geosciences, Ruhr-University Bochum, Germany, has a PhD position available.

We are inviting applications for a **PhD position (m/f/d) for three years TV-L E13 75%**

The research project takes place in cooperation between Ruhr-University Bochum, Germany and the University of Milan, Italy. The student will be based in Bochum. It focuses on the Triassic Dolomia Principale (Hauptdolomit) of the Italian Alps. The aim is to study early diagenetic dolomitisation in the context of palaeo-oceanographic, chemical-physical and biological processes. For this purpose, we are planning a combined field-, core- and laboratory study. The Dolomia Principale is a globally relevant case example of a stratigraphically very thick and regionally very extensive, early diagenetic dolomitised carbonate platform, which also underwent complex diagenetic transformations during subsidence and uplift. The processes that led to the dolomitisation are not well understood and have no recent analogue, but can be studied exemplarily in this case study. Generally, the topic of regional, early diagenetic dolomitisation of carbonate platforms is currently being studied very intensively, and, in addition to the fundamental research aspects, it is also of great relevance for geothermal reservoirs aspects, to name one example. The Department for Sediment and Isotope Geology at Bochum has an exceptionally good laboratory facility for inorganic carbonate geochemistry and extensive in carbonate sedimentology, diagenesis and geochemistry experience. We intend to apply the full range of conventional and novel isotope proxies combined with state-of-the-art proxies in carbonate petrography to unravel the history of the dolomitisation processes.

The following tasks await you

- Active participation in a dynamic research environment in Bochum and Milan.
- Carrying out field work. This includes good physical fitness and the ability to perform fieldwork in high-altitude alpine field areas. Fieldwork will include field analyses, sampling and stratigraphic work.
- Carrying out inorganic geochemical and petrographic analyses in Bochum and collaborating universities.
- Writing scientific articles and a dissertation according to the requirements of the Faculty of Geosciences of the Ruhr-University Bochum.
- Participation in national and international scientific conferences and meetings

Requirements

The candidate must have an M.Sc. degree in sedimentology or a related discipline in geosciences and must demonstrate experience in scientific writing and communication. Written and spoken English proficiency is a prerequisite for communicating in a scientific environment. Mastery of Italian is not required but is considered useful. We expect excellent social skills and a very high level of motivation. Likewise, we expect a willingness to engage in interdisciplinary cooperation with neighbouring disciplines. The ability to work in the field in an alpine environment and the corresponding level of physical fitness are required.

Contact person and further information

The position at the Ruhr-University, in the Institute of Sedimentology and Isotope Geology, is available immediately. The duration of the project is 36 months. Three scientific articles in internationally recognised journals and a dissertation should be written. The salary is in accordance with DFG rules. For details and further information, please contact A. Immenhauser (adrian.immenhauser@rub.de).

Interested applicants should email their application in pdf format to cornelia.schaefer@rub.de (cc to adrian.immenhauser@rub.de) by **31.10.2023 at the latest**. Please include:

- 1–2-page cover letter stating the project of interest, outlining your academic background and skillset, the reasons you are interested in the project, and other points of relevance
- CV and academic transcript (a copy of your M.Sc. degree certificate and any other relevant documents)
- Contact details for two suggested referees

Once shortlisted, we will arrange for a phone or teleconference interview.